

# Online Curriculum and Attendance Management Systems

## 1 . Introduction

This project is aimed at developing a web-based application to simulate all the transactions and processes of a certain college institution. The system is an online application that can be accessed throughout the organization and outside as well with proper login provided. This system can be used as an application for the TPO of the college to manage the student information with regards to curriculum management and attendance monitoring.

Apart from the core features, the proposed application should be able to help the college institution in maintaining the student profiles, auto-generating reports the teachers must produce manually and to provide the parents the transparency they need.

## 2 . Overview of the project

This project is mainly considered as an ERP for college management for new or old students, faculty, and college departments. Everything in here is all about keeping records, managing courses per semester, assigning courses to enrolled students, assigning faculty members to courses and managing student attendance every day. Actually, the challenge here is to capture the attendance of the students starting from first day up to the last day of the course.

In general, operations of this application cover from managing student registration and storing college department records and providing search facility on various college-related information.

In this project we need to fill up the basic information about the College Management System into the registration form, total qualifications, percentages, result, and all college record, and student and staff Employee current & permanent address et.

## 3 . Objectives

The main objectives of this project are following:

- Easy searching of student profiles, courses & attendance information
- Assigned courses to students per semester per school year
- Courses offered by school in a semester for that particular year
- Assign number of sections per course on that semester
- Search faculty members assigned to a section in a course for that year
- Improve report generation process on student's attendance per course
- Provide dashboard for parents to check the performance of their teens

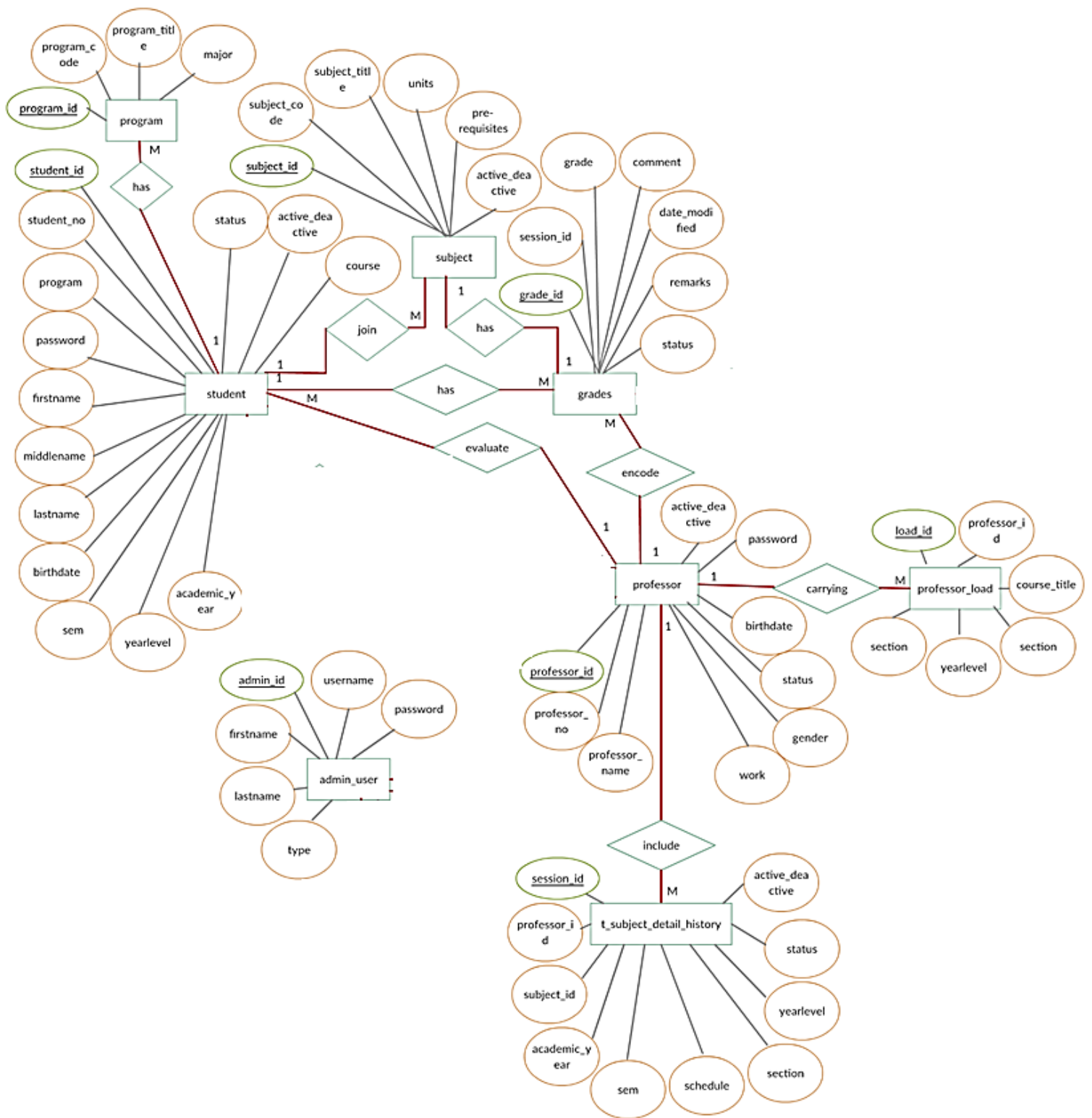
## 4 . Functional Requirements

The proposed application has 4 types of users namely: (a) students, (b) faculty member, (c) administrator, and (c) parents. The web-based application is perceived to have the following modules:

- a. Student Management module – this is for the students
  - Provides an authenticated dashboard for a student profile
  - Provides a student and editable profile dashboard
  - Provides a table pre-assigned course details to students before a semester starts per year
  - Must provide the student the freedom to edit the pre-assigned course before submitting it to the administrator
  - Must show the student the approved courses for that semester
  - Must update the student the courses left for him to take to finish the degree
  - Must update the student his current attendance status per course
  - Must show the final class card of the student after the final evaluation day
- b. Course Management module - will be available only to the administrator
  - Adds/Edits its own profile information
  - Adds a new college degree
  - Adds/Edits/Deletes courses to a degree
  - Adds/Edits/Deletes student information
  - Assigns/Edits courses to teacher
  - Assigns/Edits courses per semester to students
  - Generates class schedule to each course
- c. Faculty Management module – can be accessed only by faculty members
  - Adds/Edits its own profile
  - Provides the final assigned courses and schedule per semester every school year
  - Provides an evaluation sheet for each student per course
  - Students must be evaluated only by Passed, Conditional, and Failed
  - Must submit all grades as final
- d. Parental Access module – can be accessed only by parents
  - Must show the parents the grades per semester
  - Must show the parents the attendance per semester

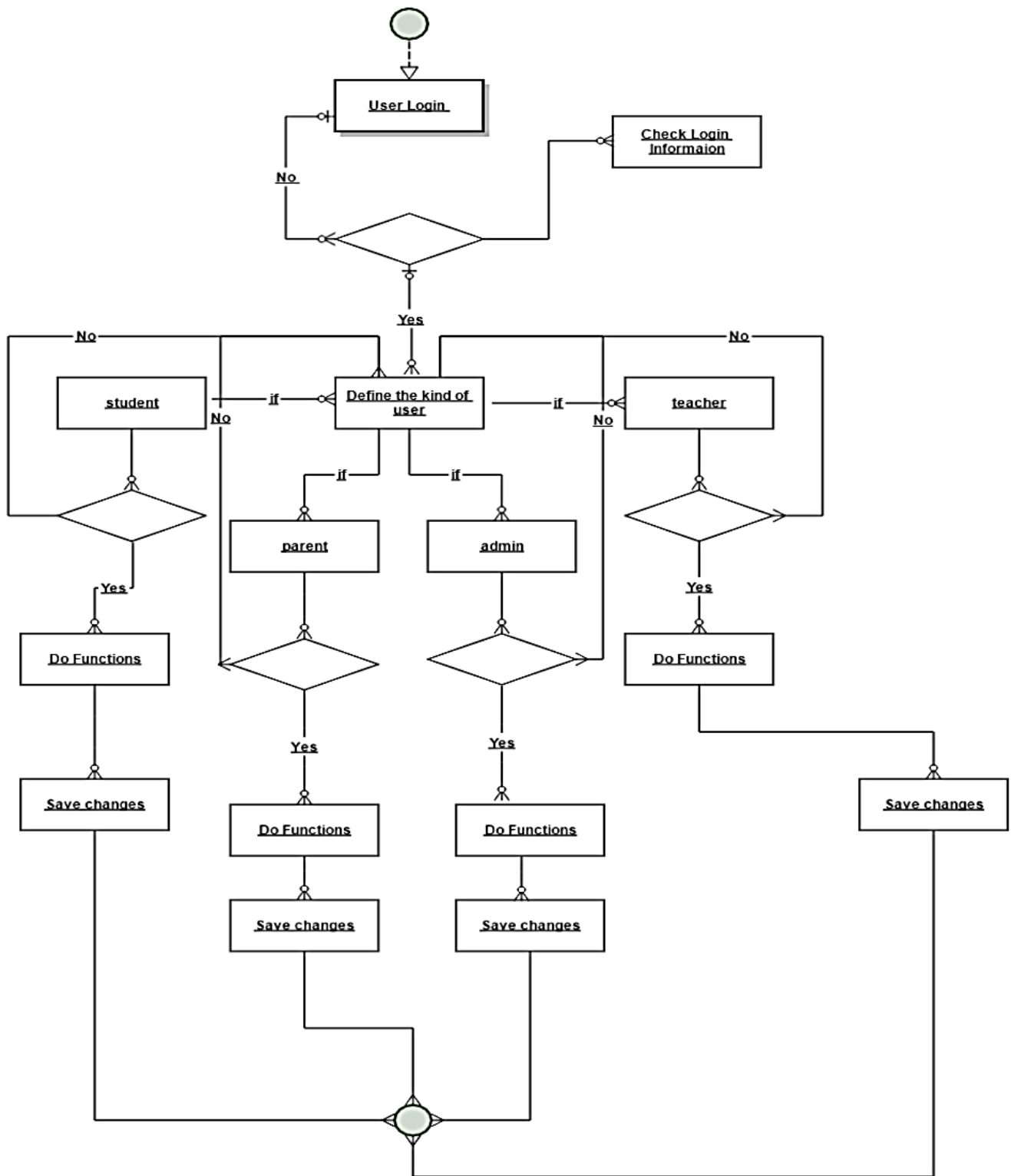
## 5. Database Design

The database schema of this application is quite a container of vast information so expect that there are lots of tables involved here. Excluded from the schema definition below is the table for the parent profile because it might just be just like the administrator's profile information.



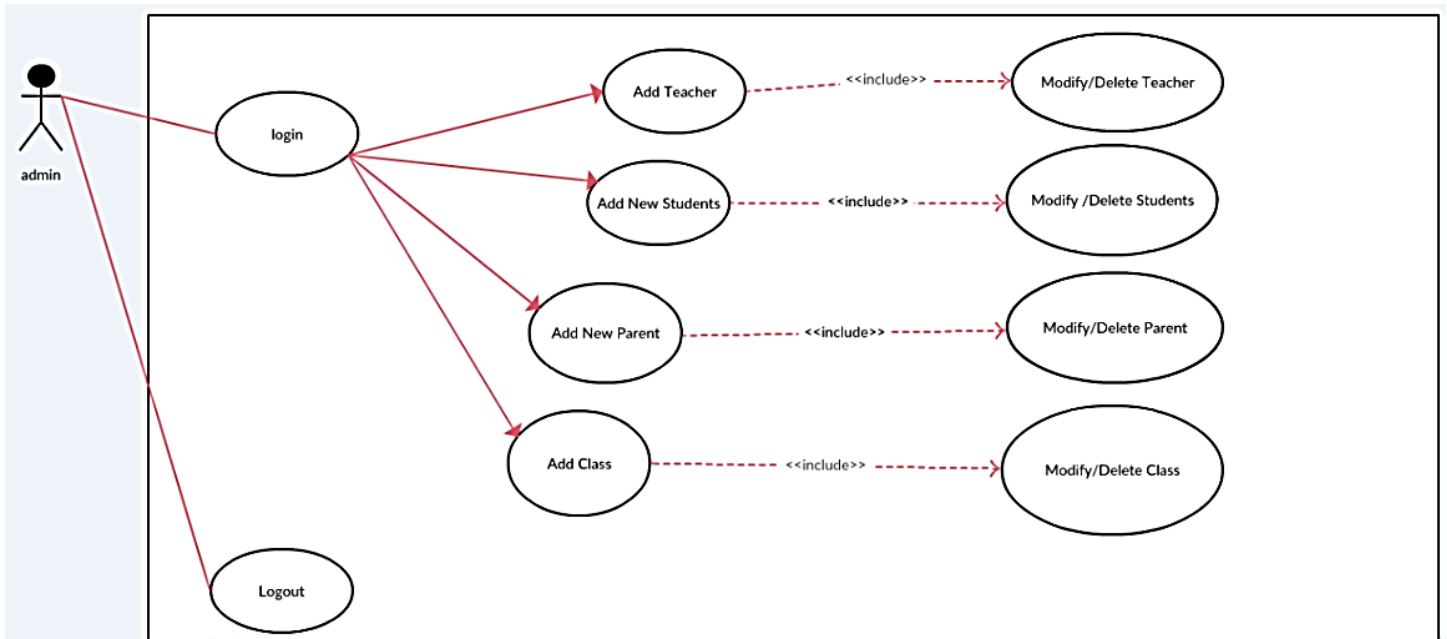
## 6. Process Flow Diagram

The activity diagram below depicts the 4 users of this application which play important roles in running of the core modules:

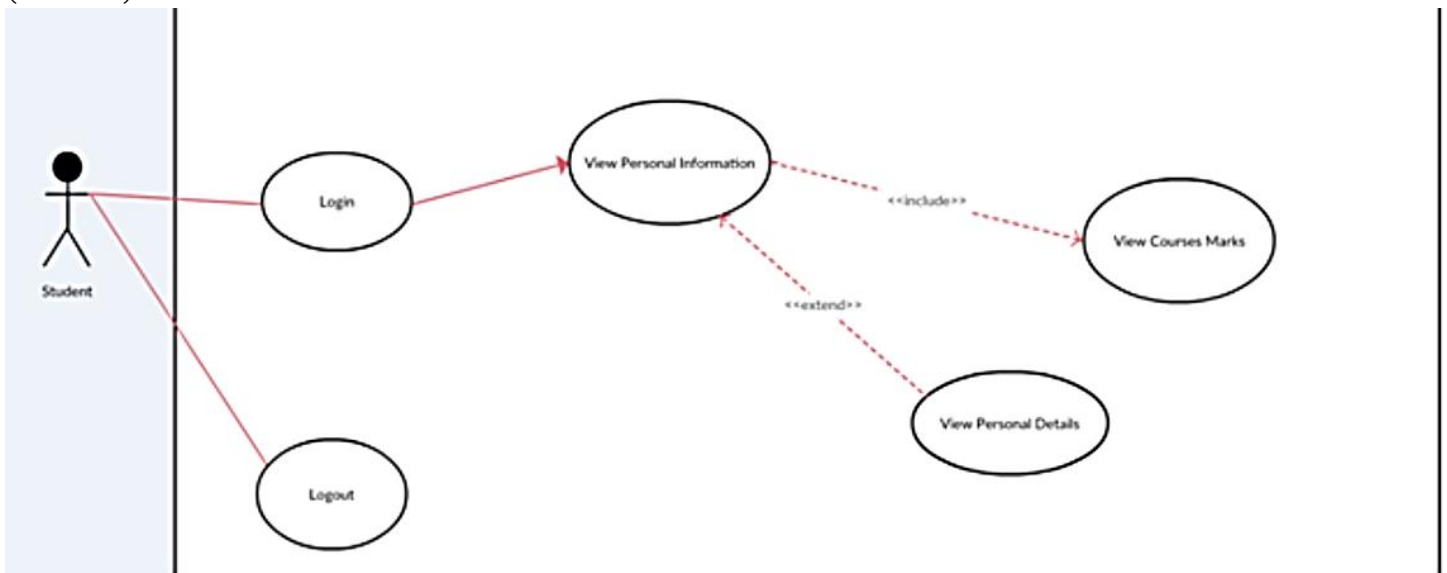


And the detailed process flow depicting the core modules are shown below:

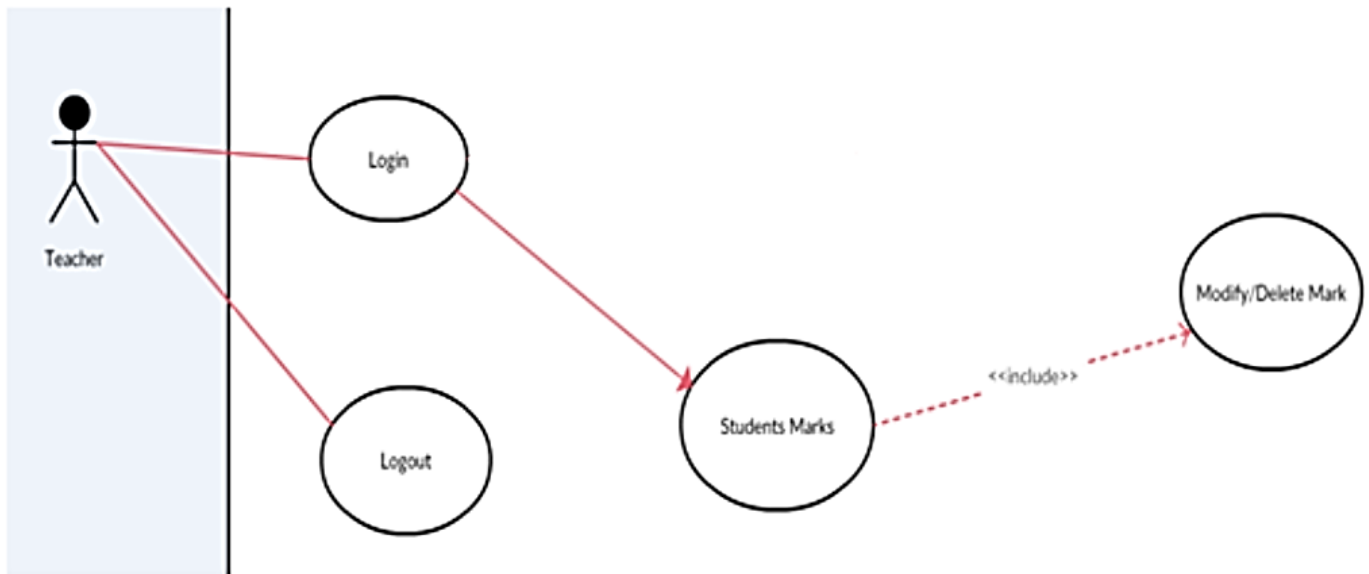
(Administrator)



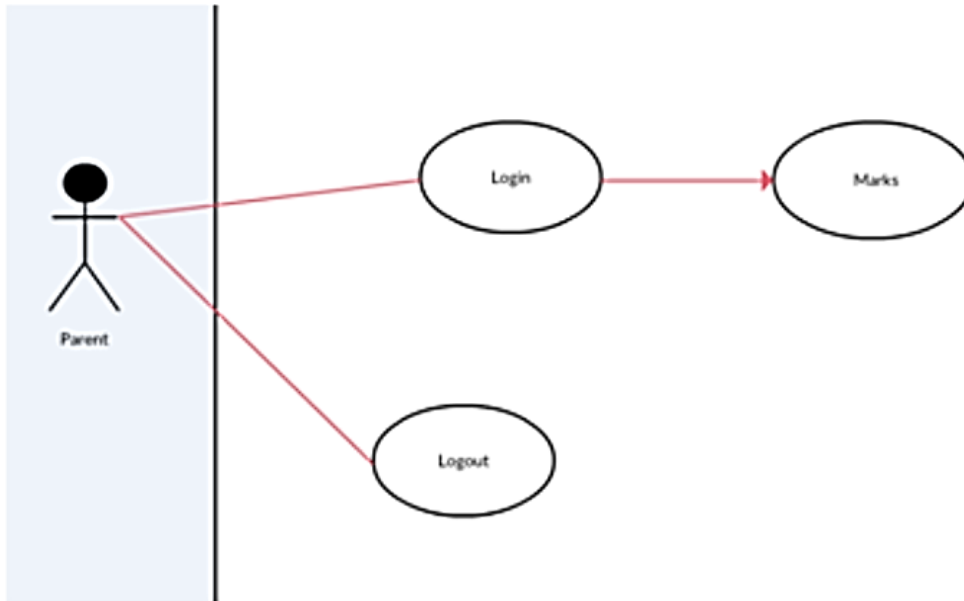
(Student)



(Faculty)



(Parent)



## 7. Sample Screenshots

The screenshots below are not to be implemented they are just guide to help you visualize the processes involved. Hopefully, you can create a better UI experience than these sample pages presented below.

(Login page)

## Login for Admin and Staffs (Lecturers, Professors)

### Admin Login

Admin Login ID (required)

Password (required)

(Faculty Course page)

By clicking on the students number you will be able to mark the attendance for the current date.

By clicking on the course name you will be able to see course statistics (attendance, course feedback).

Course Name	Start Date	End Date	Day [Time]	Room	Students	Status
<a href="#">Computer Networks</a>	2015-02-02	2015-06-02	mo [9:00-11:00]	103	<a href="#">5</a>	In progress
<a href="#">Computer Organization</a>	2015-02-02	2015-06-02	mo [9:00-11:00]	102	<a href="#">4</a>	In progress
<a href="#">Discrete Mathematics</a>	2015-02-02	2015-06-02	M,T,W,F,S [2:00-3:00]	102	<a href="#">3</a>	In progress

(Faculty Attendance page)

### Computer Networks

Current date is:

**07-04-2015**

Name	Email	Attendance	Action
<a href="#">Choudhary, Akansha</a>	<a href="mailto:akanshachoudhary@gmail.com">akanshachoudhary@gmail.com</a>	Present	<input type="button" value="Mark Absent"/>
<a href="#">Jain, Arpit</a>	<a href="mailto:arpit@gmail.com">arpit@gmail.com</a>	Absent	<input type="button" value="Mark Present"/>
<a href="#">Kumar, Akash</a>	<a href="mailto:akansha@gmail.com">akansha@gmail.com</a>	Present	<input type="button" value="Mark Absent"/>
<a href="#">Nawaz, Gul</a>	<a href="mailto:shuabhf">shuabhf</a>	Present	<input type="button" value="Mark Absent"/>
<a href="#">Yadav, Sushil</a>	<a href="mailto:sushil313131@gmail.com">sushil313131@gmail.com</a>	Absent	<input type="button" value="Mark Present"/>



(Student Course Attendance page)

These are the courses that you have registered for, if any. Please note that courses mentioned are tentative and subject to change upon teacher availability and registrants.

Course Name	Start Date	End Date	Day [Time]	Room	Status	Action
Computer Networks	2015-02-02	2015-06-02	mo [9:00-11:00]	103	In progress	[None]
Computer Organization	2015-02-02	2015-06-02	mo [9:00-11:00]	102	In progress	[None]
dbms lab	2015-02-02	2015-06-02	mo [2:00-400]	102	In progress	Evaluate
Discrete Mathematics	2015-02-02	2015-06-02	M,T,W,F,S [2:00-3:00]	102	In progress	Evaluate
oop with java	2015-02-02	2015-06-02	mo [9:00-11:00]	103	In progress	Evaluate
operating system	2015-02-02	2015-06-02	M,T,W,F,S [3:00-1:00]	102	In progress	Evaluate

(Student Enrollment page)

These are all available courses, if any. Please note that courses mentioned are tentative and subject to change upon teacher availability and registrants.

Course Name	Start Date	End Date	Day [Time]	Room	Status	Selection
Artificial Intelligence	2015-02-02	2015-06-02	mo [9:00-11:00]	104	In progress	<input type="checkbox"/>
C	2015-02-02	2015-06-02	mo [9:00-11:00]	102	In progress	<input type="checkbox"/>
Computer Networks	2015-02-02	2015-06-02	mo [9:00-11:00]	103	In progress	<input checked="" type="checkbox"/>
Computer Organization	2015-02-02	2015-06-02	mo [9:00-11:00]	102	In progress	<input checked="" type="checkbox"/>
c++	2015-02-02	2015-06-02	mo [11:00-12:00]	102	In progress	<input type="checkbox"/>
Data Structures	2015-02-02	2015-06-02	mo [9:00-11:00]	102	In Progress	<input type="checkbox"/>
dbms lab	2015-02-02	2015-06-02	mo [2:00-400]	102	In progress	<input checked="" type="checkbox"/>
Digital Design	2015-02-02	2015-06-02	M,T,W,F,S [12:00-1:00]	103	In progress	<input type="checkbox"/>
Digital Image Processing	2015-02-02	2015-06-02	mo [9:00-11:00]	102	In progress	<input type="checkbox"/>
Discrete Mathematics	2015-02-02	2015-06-02	M,T,W,F,S [2:00-3:00]	102	In progress	<input checked="" type="checkbox"/>
english	2015-02-02	2015-06-02	mo [11:00-12:00]	102	In progress	<input type="checkbox"/>
oop with java	2015-02-02	2015-06-02	mo [9:00-11:00]	103	In progress	<input checked="" type="checkbox"/>
oops	2015-02-01	2015-06-01	mo [9:00-11:00]	2	In progress	<input type="checkbox"/>
operating system	2015-02-02	2015-06-02	M,T,W,F,S [3:00-1:00]	102	In progress	<input checked="" type="checkbox"/>
Software Engineering	2015-02-02	2015-06-02	M,T,W,F,S [1:00-2:00]	103	In progress	<input type="checkbox"/>
Theory of Computation	2015-02-02	0015-06-02	mo [9:00-11:00]	102	In progress	<input type="checkbox"/>
Web Technology	2015-02-02	2015-06-02	M,T,W,F,S [12:00-1:00]	103	In progress	<input type="checkbox"/>

Enroll

(Student Attendance page)

This page has the attendance for student **Jain, Arpit** for the course **Computer Networks**.

Total number of classes: 6  
Total number of classes present: 2  
Total number of classes absent: 4

Date	Attendance
26-02-2015	Absent
27-02-2015	Absent
28-02-2015	Present
24-03-2015	Absent
02-04-2015	Present
07-04-2015	Absent



## 8 . Closing statements

The application is just part of a whole school management system focusing on student nominal performance and attendance per course every school year . And in this specification, parents have access also to the profile of the students.

This system must be implemented using Spring 5.2 RestController, Front-end framework, and JOOQ.